



## MEETING MINUTES

**MEETING DATE: APRIL 14, 2009**

**MEETING TIME: 11:00 – 12:30**

**MEETING LOCATION: SOUTHEAST METRO STORMWATER AUTHORITY**

**PROJECT NAME: EAST TOLL GATE CREEK (UPPER) MAJOR DRAINAGEWAY PLANNING  
AND FLOOD HAZARD AREA DELINEATION**

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### ATTENDANCE:

1. Shea Thomas (UDFCD), Monica Bortolini (SEMSWA), Clint Weisz (Aurora Water), Hoanh Tran (Aurora Public Works), Jason Margraf and Ken Cecil (J3 Engineering Consultants)

### MINUTES:

1. J3 presented a copy of the Hydrology Report Update for East Toll Gate Creek (Upper) to each of the project sponsors and then described the reasoning and methodology behind the effort. The major points of discussion were founded on several variables for which J3 deviated from the 2006 Kiowa Hydrology study. These are as follows:
  - a. Tributary Basin Area
  - b. Tributary Basin Composite Imperviousness
  - c. Hydraulic Routing
  - d. Detention
  - e. Total Number of Basins
2. Shea expressed caution over the number of newly defined subbasins within the model. J3 described that the caution was not unfounded, owing to the modeling results which would be explained later in the meeting.
3. Shea questioned if the soils data was different. J3 described the soils delineation and that due to the revised basin delineation, soils data was inherently different but that the deviations were minor.
4. J3 described one of the composite imperviousness discrepancies. Specifically, Kiowa developed the Comp-I table showing commercial areas to be 85% impervious, which differs from the UDFCD suggested value of 95%. Kiowa's rationale was the imposed 15% open space buffer required on commercial sites. Kiowa then used a value of 65% in the CUHP model for the



Southlands basin. J3 reviewed the aerials for Southlands and noted very little buffer area. Due to the significant percentage of pervious surfaces, J3 used a Comp-I value of 95%.

5. Monica described SEMSWA's position on Comp-I values for commercial areas, which supports values closer to the 85% value. Hoanh supported the lower Value and Monica suggested that she discuss the matter internally with SEMSWA to determine an appropriate value. Shea offered rationale behind UDFCD's value of 95% which is a function of landscaping techniques that often place plastic lining to retain moisture.
6. J3 described the rationale behind all of the "Unique Impervious Values". In particular, the 20% Comp-I value used for Open Space - Special was applied to the undeveloped area between Hampden and Quincy. The reason is due to the Arapahoe County Parks plans that have been reviewed that denote infrastructure including, roadways, parking, and other potential facilities. It was felt that 20% provided a conservative, but reasonable value.
7. Monica stated that she would review the appropriateness of Open Space – Special Comp I value of 20% with Bob Toll.
8. Shea expressed additional caution about the complete rework that had been performed and that it was a significant deviation from the previous hydrology study and also not what she was expecting following the conclusion of the kick-off meeting in which a "verification" of the prior hydrology was discussed.
9. J3 described the challenges of carrying through so many components of the 2006 Kiowa study for which we didn't have a consistent agreement, based on the most recent data that has been compiled.
10. Hoanh questioned whether HWS had routed offsite flows into the Southlands basin. J3 described that offsite flows were "pass through" flows and not directly routed into the Southlands basin or Southlands pond.
11. J3 noted the use of CUHP 1.3.1 in this hydrology update. Shea indicated she would provide the version Kiowa used so that J3's model could be run in the prior version so that the modeling results could more accurately be compared. She also indicated she would provide the actual CUHP modeling input, which J3 did not have. (Item 21 supersedes Item 14)
12. J3 commented on the clogged condition of inlets located at Versailles and E. Lake Place and that maintenance should be performed.
13. J3 indicated the methodology used to model the detention nodes and how it may differ slightly from what Kiowa had done. Subsequent review of the Kiowa models, once received, will indicate the extent of the difference. J3 will add this discussion to the results section of the hydrology update.
14. J3 noted another discrepancy not yet discussed in the hydrology update. Kiowa Manning's values are significantly higher than what J3 has utilized. J3 had not yet deconstructed the impact of this difference but would do so once the Kiowa electronic files were received and would provide an update to the team ASAP.
15. J3 will add a basin exhibit to the appendix showing the difference between the Kiowa delineation and the J3 delineation.
16. Clint indicated that prior studies had a much broader scope and intent. The concern is trying to compare the results of prior studies to J3's work which is analogous to comparing "apples to oranges" Prior studies had a different intent and thus may not have been as detailed. This does not necessarily make them less accurate but does cause some frustration because of the nature of hydrology.
17. J3 indicated that the original hydrology report by Simmons Lee & Associates would be obtained, if for no other reason, to compare how the Kiowa study relates.



18. Monica noted that it would be more advantageous to run the Kiowa model in the latest release of CUHP rather than running the J3 update in the previous version of CUHP as used by Kiowa (item 14). The group concurred.
19. Shea asked where the location of “Quincy” as referred to by J3 was. J3 noted that Q at Quincy was reported just upstream of the E-470 box culvert.
20. The group conducted a lengthy discussion regarding the differences between Kiowa results and J3 results. Some items could be explained while others could not. For this reason, J3 committed to continue looking into the discrepancies so that the group could qualitatively comment on the hydrology update.
21. Shea and the group indicated that comments relative to the hydrology update would be due back by May 5<sup>th</sup> and J3 agreed to continue resolving modeling questions and to send out explanations for the modeling differences ASAP.

**ACTION ITEMS:**

<b>Task</b>	<b>To Be Provided By</b>	<b>Status</b>
Comment on Comp I (Specifically commercial and open space special values)	SEMSWA	Closed
Electronic version of Kiowa models	UDFCD	Closed
CUHP and SWMM Executables used by Kiowa	UDFCD	Closed
Revised Basin Exhibit	J3	Closed
Acquire Simmons Lee and Associates Hydrology Report	Aurora (J3 to request)	Closed
General Comments	All Project Sponsors	Closed
Results of Item 21 and ongoing investigation	J3	Closed
Revise Hydrology Report in accordance with Project Sponsor Comments	J3	Open

**NEXT MEETING:**

None schedule at this time. Next meeting to be scheduled as necessary as per comments.